# SERVICEMANUAL

# AIRTO WATER HEAT PUMP MONOBLOCTYPE WPYA100LA WPYA080LA

### **CONTENTS**

CIDEOLEAC VILIONI

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# **SPECIFICATION**

		Unit	WPYA100LA
Cooling Capacity		kW	7.1
Heating Capacity		kW	10.0
		phase	Single
Power source		V	230
		Hz	50
		OUTLET	TOP VIEW
		=▶	Ex 580
Airflow Method		INTAKE	<b>₩</b>
			<b></b>
	lanut	W	Cooling ; 2060
Electrical Data	Input	VV	Heating ; 2300
Electrical Data	Running Current	A	Cooling ; 9.2(14.5)
	(MAX.)	A	Heating ; 10.2(18.3)
Water Pipe Size			Out ; R1(25A)
water ripe size			Return ; R1(25A)
Power Cord Number of core-wire			core-wire / 3.5~4.0mm <sup>2</sup>
	Height	mm	881.5
Dimensions	Width	mm	850
	Depth	mm	330
Net Weight	•	kg	82
Туре			Propeller Fan
Air Circulation	Motor Type		DC brushless (8-pole)
	Rated Output	W	100
Heat Evelopment			Plate fin configuration, forced draft
Heat Exchanger			18.1 FPI
Refrigerant Control Device			Expansion Valve
Refrigerant (R410A ) g 1500		1500	
Thermostat			Electronic Control

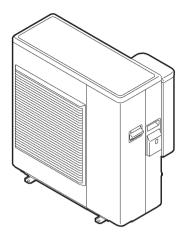
<sup>•</sup> Specifications are subject to change without notice.

# **SPECIFICATION**

		Unit	WPYA080LA	
Cooling Capacity		kW	6.4	
Heating Capacity		kW	8.0	
		phase	Single	
Power source		V	230	
		Hz	50	
		OUTLET	TOP VIEW	
		=▶	<sup>8</sup> % %	
Airflow Method		INTAKE	<b>₩</b>	
			<b></b>	
	Input	W	Cooling ; 1780	
Electrical Data	input	VV	Heating ; 1780	
Electrical Data	Running Current	A	Cooling ; 8.0(13.1)	
	(MAX.)	^	Heating ; 8.0(16.1)	
Water Pipe Size			Out ; R1(25A)	
water ripe size			Return ; R1(25A)	
Power Cord	Power Cord Number of core-wire core-wire / 3.5~4.0mm <sup>2</sup>		core-wire / 3.5~4.0mm <sup>2</sup>	
	Height	mm	881.5	
Dimensions	Width	mm	850	
	Depth	mm	330	
Net Weight	,	kg	82	
Туре			Propeller Fan	
Air Circulation	Motor Type		DC brushless (8-pole)	
	Rated Output	W	100	
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Heat Exchanger			18.1 FPI	
Refrigerant Control Device			Expansion Valve	
Refrigerant (R410A	efrigerant (R410A ) g 1500		1500	
Thermostat			Electronic Control	

<sup>•</sup> Specifications are subject to change without notice.

# UNIT



#### Operation mode

Cold water mode. Hot water mode.

### Inverter control

Inverter control reduce the ON OFF times of compressor, so can keep the water temperature changeless during operation.

### Electricity consumption

Inverter control can operate with less electricity consumption than normal air to water heat pump.

### Defrost control

Defiosting operation is controlled by the temperature of outdoor heat exchanger sensed by the thermistor.

### Anti-freezing control for the circulation water

Anti-freeze operation automatically starts when the outdoor temperature is lower than  $2^{\circ}\mathrm{C}$ 

### Time delay safety control

Restarting is inhibited for approximately 3 minutes.

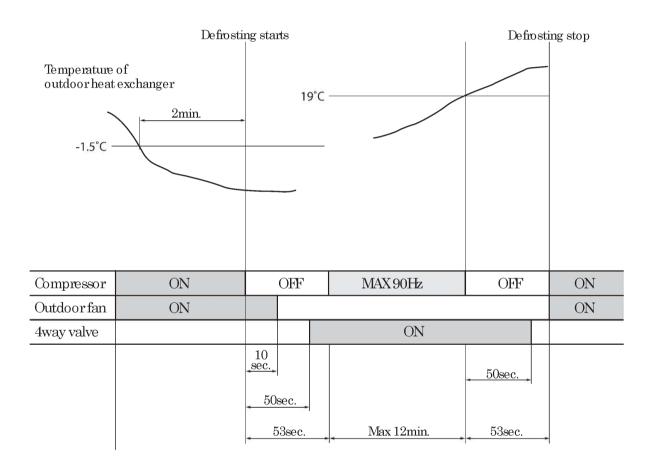
# DEFROSTING OPERATION(FOR A UNIT HEAT EXCHANGER)

- Defiosting operation is controlled by the temperature of outdoor heat exchanger sensed by the thermistor and
  the timer switch.
- Defrosting operation starts when the both of the following conditions are met at the same time.

  a)35 minutes' of continuous run of the compressor after the start of heating operation or after the completion of previous defrosting operation.
  - b)The temperature of the outdoor heat exchanger stays lower than -1.5°C continuously for two minutes.
- Defrosting operating is called off if either of the following conditions is met.

  a)The temperature of outdoor heat exchanger rises to 19°C while 4-way-valve is ON

  b)12 minutes has passed since compressor turned ON



· Working condition of frost protection heater for expansion vessel

The heater turns ON if the outdoor temperature keeps below 3 degree for 1 minute.

The heater turns OFF if the outdoor temperature keeps above 5 degree for 1 minute.

# FOR YOUR SAFETY USE

- · For the safety and proper use and handling of the product, please read and follow the instructions carefully.
- · The meaning of the marks below are as follows.

<u> </u>	Improper use will cause the significant risk of death or serious injury of the user.
<u> </u>	Improper use may cause the risk of death or serious injury of the user.

· Please refer the marks below.

$\triangle$	Caution	4	High Voltage	$\Diamond$	Prohibited
0	Strict enforcement		•	Connect the earth	ing cable

	<u> </u>			
	If leakage of refrigerant occur in the installation, ventilate a room.  If the leaked refrigerant is exposed fire, poisonous gas may be generated.	0		
	Boosting capacitor make the control box assembly high voltage.  Make the capacitor discharge enough when servicing. Otherwise will be struck by electricity.	A		
CI I	Never remodel appliance.     Use designated parts or accessories to avoid accidents.	0		
Check Point	In case of gas leakage, not only refill the required amount of the refrigerant gas but also find out the gas leakage point and mend it. If the service work has to be suspended before mending the leakage points, be sure to collect the refrigerant gas in the unit by using pump then fasten the service ports to avoid any further leakage. Poisonous gas may be generated when the leaked refrigerant is exposed to fire.	0		
	Be sure to change the cable if it is damaged.  Do not use damaged cable.	0		
	Do not use power supply cord extended or connected in halfway.	0		
<u> </u>				
Check	Be sure to put the units to earthing works.	•		
Point	- Be sure to check the insulated resistance, more than 1M $\Omega$ .			

# ERROR CODES

#### The error codes displayed on the unit display board indicate the location of the breakdown or abnormality.

UNIT ERROR CODES	APPEARANCE, PORTION, PARTS SEEMED WRONG		METHOD OF CHECK	
	POWER SUPPLY		check the power supply	
_	_	FUSE CF3 (250V T5A)	check the electric continuity by tester [see fig. 1]	
		FUSE CF1 (250V T25A)	check the electric continuity by tester [see fig. 1]	
		FAN MOTOR	take off the connector $[9]$ , and check the resistance between red-black in the connector if the resistance is over $100k\Omega$ , FAN MOTER is normal	
A0	accident of DC voltage	POWER MODULE	take off the terminals (orange and blue) and check the resistance between orange-blue if the resistance is over $100k\Omega$ , POWER MODULE is normal	
		POWER SUPPLY	check the power supply	
		SENSOR, TEMP. DISCHARGE	check the resistance by tester [see table 2]	
A1	accident of dischage temperature	SENSOR, TEMP. SUCTION	check the resistance by tester [see table 1]	
	temperature	GAS LEAKAGE	check the service valve and refrigerant circuit (pipe)	
		UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet ) check the excess gas	
	protective action	DROP OF POWER VOLTAGE	check the power voltage (230V)	
A2	against excess current DC current	POWER MODULE	operate without the junction connector of compressor lead wire →if the error code is same, POWER MODULE should be replaced	
	detection	FUSE CF2 (250V T15A)	check the electric continuity FUSE CF2 (250V T15A) by tester	
		COMPRESSOR	other than described above	
А3	CT disconnection	PCB (CONTROLLER)	change the PCB (CONTROLLER)	
	protective action against excess	UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet ) check the excess gas	
A4	- 2000	DROP OF POWER VOLTAGE	check the power voltage (230V)	
	current AC current detection MOMENTARY STOP OF POWER (IN CASE OF LIGHTNING)		check the movement by reoperation	
		UNREASONABLE OPERATION UNDER OVERLOAD	check the place of installation (blockage of air inlet & outlet ) check the excess gas	
		DROP OF POWER VOLTAGE	check the power voltage (230V)	
		FUSE CF2 (250V T15A)	check the electric continuity FUSE CF2 (250V T15A) by tester	
A5	abnormal revolution of compressor	POWER MODULE	check the resistance of POWER MODULE by tester take off the junction connector of compressor lead wire measure resistance between the connector pins of junction connector, six times between white-black, black-red, red-white respectively by changing the polarity $\rightarrow$ if all the figures show over 100k $\Omega$ , POWER MODULE is normal	
		COMPRESSOR	other than described above	
A6	accident of SENSOR	SENSOR, TEMP. SUCTION	check the resistance by tester [see table 1]	
A7	accident of SENSOR	SENSOR, TEMP. DEFROST	check the resistance by tester [see table 1]	
A8	accident of SENSOR	SENSOR, TEMP. DISCHARGE	check the resistance by tester [see table 2] (*2)	
C0	accident of POWER MODULE	POWER MODULE	POWER MODULE should be replaced	
C2	accident of SENSOR	SENSOR, TEMP. OUTDOOR	check the resistance by tester [see table 1]	
C3	accident of FAN MOTOR	FUSE CF4 (250V T3.15A) FAN MOTOR (*1)	check the electric continuity FUSE CF4 (250V T3.15A) by tester  → if it is continuity, check the voltage of FAN MOTOR  → if the voltage is nomal, FAN MOTOR should be replaced [see fig. 2]	
	TAITMOTOR	PCB (CONTROLLER)	PCB (CONTROLLER) should be replaced	
	rise of temperature MIS-INSTALLATION		check the place of installation (blockage of air inlet & outlet)	
C4	(above 110°C) of POWER MODULE	SENSOR, TEMP. POWER MODULE	POWER MODULE should be replaced	
C5	accident of SENSOR	SENSOR, TEMP. POWER MODULE	POWER MODULE should be replaced	
C6	accident of PCB (CONTROLLER)	PCB (CONTROLLER)	PCB (CONTROLLER) should be replaced	
<b>C</b> 7	I/F PCB serial error	MIS-WIRING [ PCB ( CONTROLLER ) - I/F PCB CONNECTING CABLE ] OR RARE CONTACT	check the wiring connection and rare contact	
()	I/F PCB serial error	I/F PCB	I/F PCB should be replaced	
		PCB (CONTROLLER)	PCB (CONTROLLER) should be replaced	

<sup>(\*1)</sup> When checking fan motor and/or pump, turn off the power supply completely and tatch their terminal or connector (\*2) In case of detecting the open circuit of the discharge temperature thermistor, error display appears 10 minutes after start operating. In case of detecting the short circuit of the discharge temperature thermistor, error display appears immediately.

# ERROR CODES

UNIT	A DEDICA DA NICE DOTHINON I DA DITO CINTA MITO NAZIVANO		MUNICIPAD ADALITY	
ERROR CODES	APPEARANCE, PORTION, PARIS SEEMED WRONG		MEIHOD OF CHECK	
C8 Inverter PCB serial error		CONNECTOR 13 is RARE CONTACT or POWER MODULE and PCB(CONTR-	Turn off the power supply , wait for about 3 minutes take off and insert the connector [13], and then power up again	
		OLLER)	POWER MODULE or PCB(CONTROLLER) should be replaced	
September .	0e450 9489489 S	MIS-WIRING (I/F PCB-SIEMENS CONTRO- LLER) OR RARE CONTACT	check the wiring connection and rare contact	
CC	Siemens PCB serial error	I/F PCB	I/F PCB should be repleced	
		SIEMENS CONTROLLER	Siemens controller should be replaced	
E4	accident of SENSOR	SENSOR, TEMP. OUTGOING CIRCULATING WATER	check the resistance by tester [see table 1]	
E5	accident of SENSOR	SENSOR, TEMP. RETURN CIRCULATING WATER	check the resistance by tester [see table 1]	
	PUMP (*1)	check the voltage of PUMP [see fig. 3] →if the voltage is nomal, PUMP should be replaced		
P1	accident of PUMP	PCB (CONTROLLER)	PCB (CONTROLLER) should be replaced	
		CLOGGED THE CIRCULATION PUMP AND /OR HEATING CIECUIT	check the pump and heating circuit	
U5	low-outside air	THE OUTDOOR TEMP. FALLS BELOW -20°C	below -20°C, it is likely not to operate for the protection of the equipment when the temperature rises, the unit automatically re-starts the operation	
	temperature limit	SENSOR TEMP. OUTDOOR	check the resistance by tester [see table 1]	
not cool down		4-WAY VALVE	check the resistance by tester [see fig. 4]	
		SHORT CYCLE (INSUFFICIENT AIR CIRCULATION)	check the blockage of air inlet & outlet	
		SENSOR,TEMP. OUTGOING AND RETURN CIRCULATING WATER	check the resistance by tester [see table 1]	
		GAS LEAKAGE	check the service valve and refrigerant circuit ( pipe )	
		CLOGGED HEATING CIRCUIT	check temperature difference heating flow/return large difference meens flow rate is too low	

<sup>(\*1)</sup> When checking fan motor and/or pump, turn off the power supply completely and tatch their terminal or connector

## **ELECTRIC CHARACTER**

[table 1] Sensor, temp. defrost

Sensor, temp. outdoor

Sensor, temp. suction

Sensor, temp. outgoing and return circulating water

Temp.(°C)	Resistance(kΩ)
0	31
5	24
10	19
15	15
20	12
25	10
30	8
35	6.7
40	5.5
45	4.6
50	3.8
55	3.2

[table 2] Sensor, temp. discharge

Temp.(°C)	Resistance(kΩ)
10	1,000
20	600
35	300
40	250
50	160
80	50

## DISPLAY OF ERRORS IN THE PAST

#### 1. Display method

· For a unit display board

Press and hold the PUMP SW. and RESET SW. at the same time for 5 seconds to display a past error code and its sequence number.

The PUMP SW. can then be used to select between a maximum of 8 past error codes to display. (If there are no error codes, " - - " is displayed.)

### 2. Display cancellation

• For a unit display board

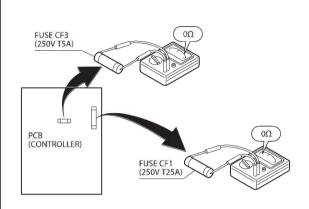
While an error code is being displayed, press and hold the PUMP SW. and RESET SW. at the same time for 5 seconds to cancel the error code display and turn off the display.

Alternatively, if no operations are performed for 5 minutes, the enorcode display is automatically cancelled and the display turned off.

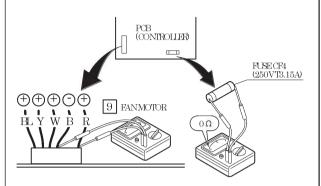
While an emorcode is being displayed, press and hold the reset switch for 10 seconds or more to delete all past emorcodes. The display turns to "--".

### CHECK FOLLOWING STEPS

[fig. 1] Continuity of current fuse on the PCB(CONTROL LEE)



[fig. 2] Voltage of fan motor on the PCB(CONTROLLER)



Measure voltage between the connector pins of connector 9. Connector 9 shall be checked during heating or cooling operation.

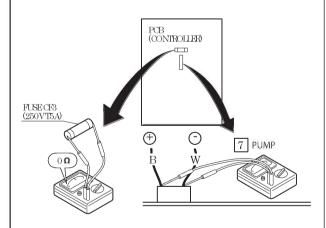
Measure voltage as follows without taking off the connector [9].

between red  $\oplus$  and black  $\bigcirc$  approx. DC200~370V between yellow  $\oplus$  and black  $\bigcirc$  approx. DC3~7V between white  $\oplus$  and black  $\bigcirc$  approx. DC15V

PCB (CONTROLLER) is Normal

◆ accident of FAN MOTOR

[fig. 3] Voltage of PUMP on the PCB(CONTROLLER)

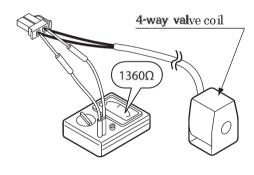


Measure voltage between the connector pins of connector 7. Connector 7 shall be checked during heating or cooling operation.

Measure voltage as follows without taking off the connector  $\boxed{7}$ .

between black  $\oplus$  and white  $\bigcirc$  approx. CONTROLLER is Normal accident of PUMP

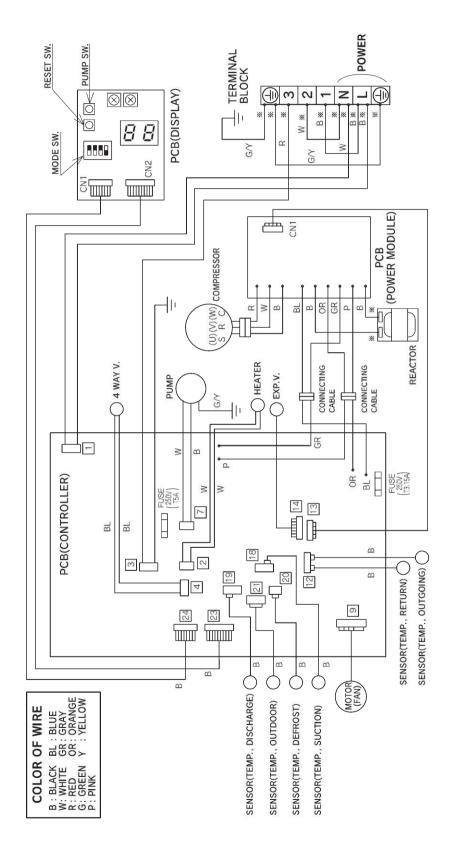
[fig. 4] Resistance of 4-way valve coil



Take off the connector and check the resistance 4-way valve coil.

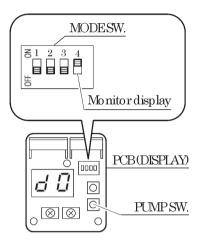
# WIRING DIAGRAM

### WPYA100LA WPYA080LA



# MONITOR DISPLAY METHOD

- 1. Switch "ON" the MODESW. 4 on the unit PCB (DISPLAY). The monitor number and monitor data are alternately displayed.
- 2. Push the PUMP SW. of the unit PCB (DISPLAY). Every time the PUMP SW. is pressed the display changes in the sequence below.
- 3. Switch "OFF" the MODESW. 4 after completing the check.



Monitor display contents

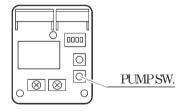
Monitor	Monitor data display cont	tents
d0	Circulating water return temperature	Units of 1°C
d1	Compressor operating frequency	Units of 1Hz
d2	Discharge temperature	Units of 1°C
d3	Power consumption value	Units of 100W
d4	Interface voltage	Units of 0.1V
d5		
d6	Ambient air temperature	Units of 1°C
d7	External thermistor temperature	Units of 1°C
d8	Suction temperature	Units of 1°C
d9	Circulating water outgoing temperature	Units of 1°C

## CHARGETHE CIRCULATION WATER AND AIR PURGE IN WATER CIRCUIT

- When you push PUMP SW on display PCB, the water pump is started to operate to circulate the water:
  - The each digital segment of right side on display PCB lights in sequence during operating the pump.
- The pump is automatically stopped after operating for 10 minutes.

  If it is not enough to let the air out of water circuit, please push PUMP SW once again after the pump stopped.

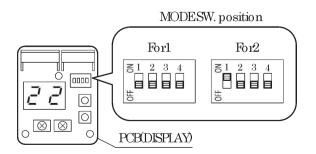
When you would like to stop operating the pump before the pump is automatically stopped, please push PUMP SW once again.



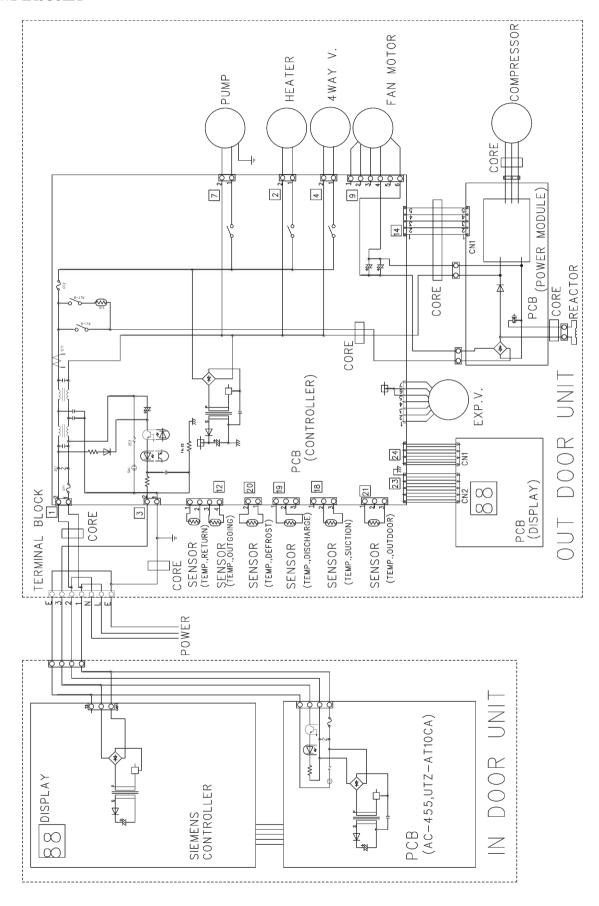
### **FREEZEPREVENTION SETTING**

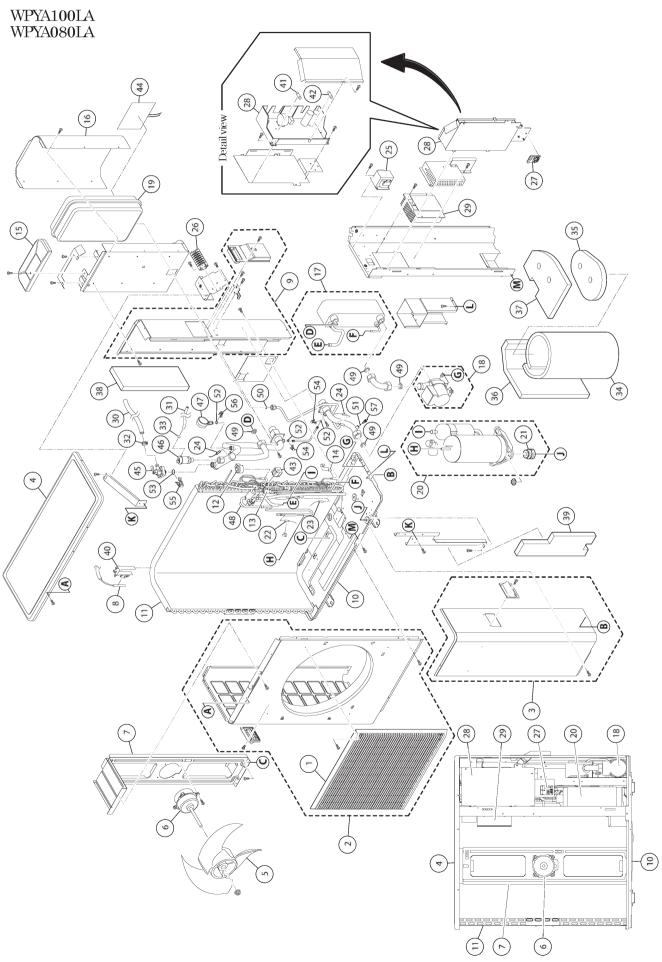
- If the outside temperature falls below about  $2^{\circ}$ C, freeze prevention operation is possible depending on the unit MODE SW. 1
  - OFF: 1. No freeze prevention operation (When using antifreeze)
  - ON : 2. Freeze prevention operation (When the outdoor temperature falls below about 2°C, the circulating water is warmed and circulated.)

The factory setting is "ON: 2. Freeze prevention operation".



### WPYA100LA WPYA080LA





### WPYA100LA WPYA080LA

OUTLET CRILLE   30112520			I
2	No.	PARTS NAME	PARIS No.
TRONT PANIELASSY			
4         TOP PANELASSY.         20600401           5         PROPPILIREAN         52630190           6         MOTOR         30112580           7         RRACKERMOTOR         20605280           8         SENSORTEMEOUTDOOR         30114360           9         BACKPANELASSY         20600421           10         DOTTOM PANELASSY         20605621           11         CONDENSORASSY         20605621           12         COLLEXPANSIONVALVE         51914531           13         SENANSIONVALVE         30112630           14         SENSORTEMEDIPHOSI)         30114350           15         TANKCOVER(GIOP)         20605930           16         TANKCOVER(SIDE)         20605920           17         HEATEXCHANNEERASSY.         20605960           19         TANK         30112640           20         COMPRESSOR         30113070           21         VIBRATION PROOF RUBBER         30001110           22         SENSOR (TEMESUCITION)         30089900           24         SENSOR (TEMESUCITION)         30089900           24         SENSOR (TEMESUCITION)         30112530           25         REACIOR         30112970			
5         PROPELER EAN         52630190           6         MOTOR         30112580           7         BRACKET,MOTOR         20605280           8         SENSOR (TEMPOUTDOOR)         30114360           9         BACKPANELASSY         20600421           10         BOTTOM PANELASSY         20605621           11         CONDENSOR ASSY         20605621           12         COILEXPANSION VALVE         51914531           13         EXPANSION VALVE         30112630           14         SENSOR (TEMPEDEPROSI)         30114350           15         TANKCOVER (SIDE)         20605920           16         TANKCOVER (SIDE)         20605920           17         HEAT ENCHANNEER ASSY         2060591           18         PUMP ASSY         20605960           19         TANK         30112640           20         COMPRESSOR         30113070           21         VIERATICAN PROOF RUBBER         30001110           22         SENSOR (TEMPEDISCHARE)         51100870           23         SENSOR (TEMPEDISCHARE)         51100870           23         SENSOR (TEMPEDISCHARE)         30112590           24         SENSOR (TEMPEDISCHARE)         <			20600380
6         MOTOR         30112580           7         BRACKEEMOTOR         20605280           8         SENSOR(TEMPOUTDOOR)         30114360           9         BACKPANELASSY         20600421           10         BOTTOM PANILASSY.         20600421           11         CONDENSORASSY.         20605621           12         COILEXPANSION VALVE         51914531           13         EXPANSION VALVE         30112630           14         SENSOR(TEMEDEFROST)         30114350           15         TANKCOVER (SIDP)         20605930           16         TANKCOVER (SIDP)         20605990           17         HEATENCHANNEBRASSY.         20605960           19         TANK         30112640           20         COMPRESSOR         30113070           21         VIERATION PROOF RUBBER         3001110           22         SENSOR(TEMEDISCHARED         51100870           23         SENSOR(TEMEDISCHARED         51100870           23         SENSOR(TEMPERCULATING WATER)         30112930           24         SENSOR(TEMPERCULATING WATER)         30112930           25         RPACTOR         30112930           26         TERMINALBEOCK		TOP PANELASSY	20600401
7         ERACKET,MOTOR         20605280           8         SENSOR (TEMPOUIDOOR)         30114360           9         BACKPANELASSY         20600421           10         BOTTOMPANELASSY         20605621           11         CONDENSORASSY         20605621           12         COLLENEANSION VALIVE         51914531           13         ENEANSION VALIVE         30112630           14         SENSOR (TEMPEDEPROST)         30114350           15         TANKCOVER (TOP)         20605930           16         TANKCOVER (TOP)         20605920           17         HEAT EXCHANNERASSY.         20605920           18         PUMP ASSY.         20605930           19         TANK         30112640           20         COMPRESSOR         30113070           21         VIBRATION PROCERTIBER         30001110           22         SENSOR (TEMPEDISCHARED)         51100870           23         SENSOR (TEMPEDISCHARED)         51100870           23         SENSOR (TEMPEDISCHARED)         30112530           24         SENSOR (TEMPEDISCHARED)         30112530           25         REACTOR         30112540           26         TERMINALERIOCK		PROPELLERFAN	52630190
8         SENSOR(TEMPOUTDOOR)         30114360           9         BACKPANELASSY         20600421           10         BOTTOM PANELASSY         20600421           11         CONDENSORASSY         20605621           12         COIL, EXPANSION VALVE         51914531           13         ERANSION VALVE         30112630           14         SENSOR (TEMP DEFROST)         30114350           15         TANK COVER (SIDP)         20605930           16         TANK COVER (SIDP)         20605930           16         TANK COVER (SIDP)         20605920           17         HEAT EXCHANNIGHRASSY         20605960           19         TANK         30112640           20         COMPRESSOR         30113070           21         VIBRATION PROOF RUBBER         30001110           22         SENSOR (TEMPESUCTION)         30089900           24         SENSOR (TEMPESUCTION)         30089900           24         SENSOR (TEMPESUCTION)         30089900           24         SENSOR (TEMPERICULATING WATER)         30112580           26         TERMINALELOCK         30112590           27         PCB (DISPLAY)         30051560           PCB (CONTROLLER) with		MOTOR	30112580
9 BACKPANELASSY 20600421 10 BOTTOM PANELASSY 20600441 11 CONDENSORASSY 20605621 12 COLLEMANSION VALVE 51914531 13 EXPANSION VALVE 30112630 14 SENSOR (TEMP DEPROST) 30114350 15 TANK COVER (TOP) 20605930 16 TANK COVER (SIDE) 20605920 17 HEAT EXCHANN CHERASSY 20605960 18 PUMP ASSY 20605960 19 TANK 30112640 20 COMPRESSOR 30112640 20 COMPRESSOR 30112640 20 COMPRESSOR 3010110 22 SENSOR (TEMP DISCHARCH) 51100870 23 SENSOR (TEMP DISCHARCH) 51100870 24 SENSOR (TEMP DISCHARCH) 30112980 25 REACTOR 30112530 26 TERMINAL BLOCK 30112970 27 PCB (DISPLAY) 30051560 28 PCB (CONTROLLED with CASE (WPYA100LA) 30112540+20605320 29 PCB (CONTROLLED with CASE (WPYA080LA) 30114250 31 RUBBER HOSE (FOR RELEF VALVE) 3014430 32 HOSE BAND (FOR RELEF VALVE) 3014430 33 HOSE BAND (FOR RELEF VALVE) 3014430 34 SOUND PROOF MATERIAL 20611980 35 SOUND PROOF MATERIAL 20611980 36 SOUND PROOF MATERIAL 20611990 38 SOUND PROOF MATERIAL 20611990 39 SOUND PROOF MATERIAL 20611990 30 SOUND PROOF MATERIAL 20611990 30 SOUND PROOF MATERIAL 20611990 31 RUBBER HOSE (FOR MATERIAL 20611990 32 SOUND PROOF MATERIAL 30112670 44 TANKHEATER 30114370 45 RELEF VALVE 30112680 47 PRESSURE CALCE 30112680 48 4-WAY VALVE 30104090	7	BRACKET,MOTOR	20605280
10   BOTTOMPANELASSY   20600441   11   CONDENSORASSY   20605621   12   COILEXPANSIONVALIVE   51914531   13   EXPANSIONVALIVE   30112630   14   SENSOR (TEMPDEFROST)   30114350   15   TANKCOVER (TOP)   20605930   16   TANKCOVER (TOP)   20605920   17   HEAT EXCHANNGERASSY   20605960   19   TANK   30112640   20605960   19   TANK   30112640   20   COMPRESSOR   30113070   21   VIERVITON PROOF RUBBER   30001110   22   SENSOR (TEMPEDIS CHARGE)   51100870   23   SENSOR (TEMPEDIS CHARGE)   51100870   23   SENSOR (TEMPEDIS CHARGE)   51100870   23   SENSOR (TEMPEDIS CHARGE)   30112530   24   SENSOR (TEMPEDIS CHARGE)   30112530   25   REACTOR   30112970   27   PCB (DISPLAY)   30051560   28   PCB (CONTROLLER) with CASE (WPYA1001A)   30112540+20605324   PCB (CONTROLLER) with CASE (WPYA0801A)   30116780+20605324   29   PCB (CONTROLLER) with CASE (WPYA0801A)   30114420   31   RUBBER HOSE (FOR AIR PURGEVALIVE)   30114430   32   HOSE BAND (FOR AIR PURGEVALIVE)   30084480   33   HOSE BAND (FOR AIR PURGEVALIVE)   30114430   34   SOUND PROOF MATERIAL   20611960   35   SOUND PROOF MATERIAL   20611960   36   SOUND PROOF MATERIAL   20611960   37   SOUND PROOF MATERIAL   20611960   38   SOUND PROOF MATERIAL   20611960   39   SOUND PROOF MATERIAL   20611960   39   SOUND PROOF MATERIAL   20611960   30   SOUND PROOF MATERIAL   30   30   30   30   30   30   30   3	8	SENSOR (TEMP.OUTDOOR)	30114360
11	9	BACKPANELASSY	20600421
12   COILEXPANSION VAINE   51914531   13   EXPANSION VAINE   30112630   14   SENSOR (TEMEDEFROST)   30114350   15   TANKCOVER (SIDE)   20605930   16   TANKCOVER (SIDE)   20605920   17   HEATEXCHANNCERASSY   20606791   18   PUMP ASSY   20605960   19   TANK   30112640   20   COMPRISSOR   30113070   21   VIERATION PROOF RUBEER   30001110   22   SENSOR (TEMEDISCHARGE)   51100870   23   SENSOR (TEMEDISCHARGE)   51100870   24   SENSOR (TEMEDISCHARGE)   51100870   24   SENSOR (TEMEDISCHARGE)   30112980   25   REACTIOR   30112980   25   REACTIOR   30112970   27   PCBIOISPLAY   30051560   26   TERMINALBLOCK   30112970   27   PCBIOISPLAY   30051560   28   PCB(CONTROLLER) with CASE (WPYA100LA)   30116780+20605320   29   PCB (POWERMODULD ASSY WITH HEAT SINK   20605341   30   RUBEER HOSE (FOR RELEIF VALVE)   30114420   30114420   31   RUBEER HOSE (FOR RELEIF VALVE)   30114430   30114420   31   RUBEER HOSE (FOR RELEIF VALVE)   30084480   33   HOSE BAND (FOR RELEIF VALVE)   36816090   34   SOUND PROOF MATERIAL   20611960   35   SOUND PROOF MATERIAL   20611960   36   SOUND PROOF MATERIAL   20611980   37   SOUND PROOF MATERIAL   20611980   37   SOUND PROOF MATERIAL   20611980   38   SOUND PROOF MATERIAL   20611980   39   SOUND PROOF MATERIAL   20611990   39   SOUND PROOF MATERIAL   20611990   39   SOUND PROOF MATERIAL   20611960   30   SOUND PROOF MATERIAL   20611970   36   SOUND PROOF MATERIAL   20611980   37   SOUND PROOF MATERIAL   20611960   39   SOUND PROOF MATERIAL   30112670   40   OUTDOOR THERMISTOR HOUDER   40   40016410   41   FUSES A)   40016410   42   FUSES A)   40016410   44   TANKHEATER   30112670   46   AIR FUREEVALVE   30112680   47   PRISSURE GALCE   30112680   47   PRISSURE GALCE   30112690   48   4-WAYVALVE   30104090   4	10	BOTTOM PANELASSY.	20600441
13   EXPANSION VALUE   30112630   14   SENSOR (TEMIPDEPROST)   30114350   15   TANKCOVER (TOP)   20605930   16   TANKCOVER (SIDE)   20605920   17   HEAT EXCHANNGER ASSY.   20605960   18   PUMP ASSY   20605960   19   TANK   30112640   20   COMPRESSOR   30113070   21   VIERATION PROOF RUBBER   30001110   22   SENSOR (TEMIPDISCHARGE)   51100870   23   SENSOR (TEMIPDISCHARGE)   51100870   23   SENSOR (TEMIPDISCHARGE)   30112530   24   SENSOR (TEMIPCIRCULATING WATER)   30112980   25   REACTOR   30112530   26   TERMINALELOCK   30112570   27   PCB (DISPLAY)   30051560   28   PCB (CONTROLLER) with CASE (WPYA100LA)   30112540+20605320   29   PCB (POWERMODULD ASSY WITH HEAT SINK   20605341   30   RUBBER HOSE (FOR RELIEF VALUE)   30114420   31   RUBBER HOSE (FOR RELIEF VALUE)   3014430   30084480   33   HOSE BAND (FOR RELIEF VALUE)   30084480   34   SOUND PROOF MATERIAL   20611960   35   SOUND PROOF MATERIAL   20611960   36   SOUND PROOF MATERIAL   20611990   38   SOUND PROOF MATERIAL   20611990   39   SOUND PROOF MATERIAL   20611990   30   SOUND PROOF MATERIAL   20611990   30   SOUND PROOF MATERIAL   20611960   37   SOUND PROOF MATERIAL   20611990   38   SOUND PROOF MATERIAL   20611990   38   SOUND PROOF MATERIAL   20611990   38   SOUND PROOF MATERIAL   20611990   39   SOUND PROOF MATERIAL   20611960   40   OUTDOOR THE MISTOR HOLDER   20040100   41   FUSE(5A)   40016400   42   PUSE(3.15A)   40016400   43   COIL 4 WAY VALVE   30112680   47   PRESSURE GALVE   30112680   47   PRESSURE GALVE   30112690   48   4 WAY VALVE   30104090   48   4 WAY VALVE   30104	11	CONDENSORASSY	20605621
14   SENSOR (TEMPEDEFROST)   30114350     15   TANKCOVER (TOP)   20605930     16   TANKCOVER (SIDE)   20605920     17   HEATEXCHANNGER ASSY   20605960     18   PUMP ASSY   20605960     19   TANK   30112640     20   COMPRESSOR   30113070     21   VIERATION PROOF RUBBER   30001110     22   SENSOR (TEMPEDISCHARGE)   51100870     23   SENSOR (TEMPEDISCHARGE)   30112980     24   SENSOR (TEMPEDISCHARGE)   30112530     25   REACTOR   30112530     26   TERMINALBLOCK   30112970     27   PCB (DISPLAY)   30051560     28   PCB (CONTROLLER) with CASE (WPYA1001A)   30112540+20605320     29   PCB (CONTROLLER) with CASE (WPYA0801A)   30116780+20605320     29   PCB (POWER MODULE) ASSY WITH HEAT SINK   20605341     30   RUBBER HOSE (FOR RELIET VALVE)   30114420     31   RUBBER HOSE (FOR RELIET VALVE)   30114430     32   HOSE BAND (FOR RELIET VALVE)   30084480     33   HOSE BAND (FOR RELIET VALVE)   68616090     34   SOUND PROOF MATERIAL   20611960     35   SOUND PROOF MATERIAL   20611970     36   SOUND PROOF MATERIAL   20611980     37   SOUND PROOF MATERIAL   20611990     38   SOUND PROOF MATERIAL   20611990     39   SOUND PROOF MATERIAL   2061190     40   OUTDOOR THE MISTOR HOLDER   20040100     41   FUSE(5A)   40016400     42   FUSE(3.15A)   40016400     43   COIL, 4-WAY VALVE   30112680     44   TANKHEATER   30112680     45   PRESSURE GALUE   30112680     46   AFFURGEVALVE   30112680     47   PRESSURE GALUE   30104090     48   4-WAY VALVE   30104090	12	COIL, EXPANSION VALVE	51914531
15	13	EXPANSION VALVE	30112630
16	14	SENSOR (TEMP.DEFROST)	30114350
17	15	TANKCOVER (TOP)	20605930
18	16	TANKCOVER (SIDE)	20605920
18	17	HEAT EXCHANNGER ASSY	20606791
TANK   30112640			
20			
21         VIBRATION PROOF RUBBER         30001110           22         SENSOR (TEMP.DISCHARGE)         51100870           23         SENSOR (TEMP.SUCTION)         30089900           24         SENSOR (TEMP.CIRCULATING WATER)         30112980           25         REACTOR         30112530           26         TERMINAL BLOCK         30112970           27         PCB (DISPLAY)         30051560           PCB (CONIROLLER) with CASE (WPYA100LA)         30112540+20605320           PCB (CONIROLLER) with CASE (WPYA080LA)         30116780+20605320           29         PCB (CONIROLLER) with CASE (WPYA080LA)         30114420           30         RUBBER HOSE (FOR RELIEF VALVE)         30114420           31         RUBBER HOSE (FOR RELIEF VALVE)         30114430           32         HOSE BAND (FOR RELIEF VALVE)         30114430           34         SOUND PROOF MATERIAL         20611960           35			
22         SENSOR (TEMPDISCHARGE)         51100870           23         SENSOR (TEMPSUCTION)         30089900           24         SENSOR (TEMPCIRCULATING WATER)         30112980           25         REACTOR         30112530           26         TERMINALBIOCK         30112970           27         PCB (DISPLAY)         30051560           28         PCB (CONIROLLER) with CASE (WPYA100LA)         30112540+20605320           29         PCB (CONIROLLER) with CASE (WPYA080LA)         30116780+20605320           29         PCB (FOWERMODILE) ASSY WITH HEAT SINK         20605341           30         RUBBERHOSE (FOR RELEIF VALVE)         30114420           31         RUBBERHOSE (FOR RELEIF VALVE)         30114430           32         HOSEBAND (FOR RELEIF VALVE)         30084480           33         HOSEBAND (FOR AIR PURGE VALVE)         30084480           34         SOUND PROOF MATERIAL         20611960           35         SOUND PROOF MATERIAL         20611970           36         SOUND PROOF MATERIAL         20611980           37         SOUND PROOF MATERIAL         20612000           39         SOUND PROOF MATERIALS         20612010           40         OUTDOOR THERMISTOR HOLDER         40016410			
23         SENSOR (TEMPSUCTION)         30089900           24         SENSOR (TEMPCIRCULATING WATER)         30112980           25         REACTOR         30112530           26         TERMINAL BLOCK         30112970           27         PCB (DISPLAY)         30051560           28         PCB (CONTROLLER) with CASE (WPYA100LA)         30112540+20605320           29         PCB (POWER MODULE) ASSY WITH HEAT SINK         20605341           30         RUBBER HOSE (FOR RELEIF VALVE)         30114420           31         RUBBER HOSE (FOR AIR PURGE VALVE)         30114430           32         HOSEBAND (FOR RELIEF VALVE)         30084480           33         HOSEBAND (FOR AIR PURGE VALVE)         68616090           34         SOUND PROOF MATERIAL         20611960           35         SOUND PROOF MATERIAL         20611970           36         SOUND PROOF MATERIAL         20611980           37         SOUND PROOF MATERIAL         20612000           39         SOUND PROOF MATERIAL         20612010           40         OUTDOOR THERMISTOR HOLDER         40016410           41         FUSE(3.15A)         40016400           42         FUSE(3.15A)         40016400           43			
24         SENSOR (TEMPCIRCULATING WATER)         30112980           25         REACTOR         30112530           26         TERMINAL BLOCK         30112970           27         PCB (DISPLAY)         30051560           28         PCB (CONTROLLER) with CASE (WPYA100LA)         30112540+20605320           29         PCB (CONTROLLER) with CASE (WPYA080LA)         30116780+20605320           29         PCB (POWER MODULE) ASSY WITH HEAT SINK         20605341           30         RUBBER HOSE (FOR RELEIF VALVE)         30114420           31         RUBBER HOSE (FOR AIR PURGEVALVE)         30114430           32         HOSEBAND (FOR RELEIF VALVE)         30084480           33         HOSEBAND (FOR AIR PURGEVALVE)         68616090           34         SOUND PROOF MATERIALI         20611960           35         SOUND PROOF MATERIALI         20611970           36         SOUND PROOF MATERIALI         20611980           37         SOUND PROOF MATERIALI         20611990           38         SOUND PROOF MATERIALI         20612000           39         SOUND PROOF MATERIALI         20612010           40         OUTDOORTHERMISTOR HOLDER         40016410           42         FUSE(3.15A)         40016400			
25         REACTOR         30112530           26         TERMINALBLOCK         30112970           27         PCB(DISPLAY)         30051560           28         PCB(CONIROLLER) with CASE(WPYA100LA)         30112540+20605320           29         PCB(CONIROLLER) with CASE(WPYA080LA)         30116780+20605320           29         PCB(POWERMODULE) ASSY, WITH HEATSINK         20605341           30         RUBBERHOSE (FOR RELIEF VALVE)         30114420           31         RUBBERHOSE (FOR AIR PURGE VALVE)         30114430           32         HOSEBAND (FOR AIR PURGE VALVE)         30084480           33         HOSEBAND (FOR AIR PURGE VALVE)         68616090           34         SOUND PROOF MATERIALI         20611960           35         SOUND PROOF MATERIALI         20611970           36         SOUND PROOF MATERIALI         20611990           38         SOUND PROOF MATERIALI         20612000           39         SOUND PROOF MATERIALI         20612000           40         OUTDOOR THERMISTOR HOLDER         20040100           41         FUSE(5A)         40016410           42         FUSE(3.15A)         40016400           43         COIL, 4-WAYVALVE         30112670           46			
26         TERMINALBIOCK         30112970           27         PCB(DISPLAY)         30051560           28         PCB(CONIROLLER) with CASE(WPYA100LA)         30112540+20605320           29         PCB(CONIROLLER) with CASE(WPYA080LA)         30116780+20605320           29         PCB(POWERMODULE) ASSY, WITH HEAT SINK         20605341           30         RUBEER HOSE (FOR RELEF VALVE)         30114420           31         RUBEER HOSE (FOR AIR PURGE VALVE)         30114430           32         HOSE BAND (FOR AIR PURGE VALVE)         30084480           33         HOSE BAND (FOR AIR PURGE VALVE)         68616090           34         SOUND PROOF MATERIALI         20611960           35         SOUND PROOF MATERIALI         20611970           36         SOUND PROOF MATERIALI         20611980           37         SOUND PROOF MATERIALI         20612000           39         SOUND PROOF MATERIALI         20612000           40         OUTDOOR THERMISTOR HOLDER         20040100           41         FUSE(5A)         40016410           42         FUSE(3.15A)         40016400           43         COIL, 4-WAYVALVE         30112670           46         AIR PURGE VALVE         30112680		<u> </u>	
27   PCB(DISPLAY)   30051560			
PCB(CONTROLLER) with CASE(WPYA100LA)   30112540+20605320     PCB(CONTROLLER) with CASE(WPYA080LA)   30116780+20605320     29			
PCB(CONTROLLER) with CASE(WPYA080LA)  29 PCB(POWERMODULE) ASSY WITH HEAT SINK  20605341  30 RUBBERHOSE(FOR RELIF VALVE)  31 RUBBERHOSE(FOR AIR PURGE VALVE)  31 RUBBERHOSE(FOR AIR PURGE VALVE)  32 HOSEBAND (FOR AIR PURGE VALVE)  33 HOSEBAND (FOR AIR PURGE VALVE)  34 SOUND PROOF MATERIALI  20611960  35 SOUND PROOF MATERIALI  36 SOUND PROOF MATERIALI  37 SOUND PROOF MATERIALI  38 SOUND PROOF MATERIALI  39 SOUND PROOF MATERIALI  40 OUTDOOR THERMISTOR HOLDER  40 OUTDOOR THERMISTOR HOLDER  41 FUSE(5A)  42 FUSE(3.15A)  40016410  44 TANKHEATER  30112670  46 AIR PURGE VALVE  30112680  47 PRESSURE GAUGE  30104090	21		
29         PCB (POWERMODULE) ASSY WITH HEAT SINK         20605341           30         RUBBER HOSE (FOR RELEIF VALVE)         30114420           31         RUBBER HOSE (FOR AIR PURGE VALVE)         30114430           32         HOSEBAND (FOR AIR PURGE VALVE)         30084480           33         HOSEBAND (FOR AIR PURGE VALVE)         68616090           34         SOUND PROOF MATERIAL         20611960           35         SOUND PROOF MATERIAL         20611970           36         SOUND PROOF MATERIAL         20611980           37         SOUND PROOF MATERIAL         20611990           38         SOUND PROOF MATERIAL         20612000           39         SOUND PROOF MATERIAL         20612010           40         OUTDOOR THERMISTOR HOLDER         20040100           41         FUSE(5A)         40016410           42         FUSE(3.15A)         40016400           43         COIL, 4-WAYVALVE         30112610           44         TANKHEATER         30114370           45         RELIEF VALVE         30112680           47         PRESSURE GAUGE         30112690           48         4-WAYVALVE         30104090	28		
30       RUBBERHOSE (FOR RELEFVALVE)       30114420         31       RUBBERHOSE (FOR AIR PURGEVALVE)       30114430         32       HOSEBAND (FOR RELIFFVALVE)       30084480         33       HOSEBAND (FOR AIR PURGEVALVE)       68616090         34       SOUND PROOF MATERIALI       20611960         35       SOUND PROOF MATERIALI       20611970         36       SOUND PROOF MATERIALI       20611980         37       SOUND PROOF MATERIALI       20611990         38       SOUND PROOF MATERIALI       20612000         39       SOUND PROOF MATERIALI       20612010         40       OUTDOORTHERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112690         48       4-WAYVALVE       30104090	20		
31       RUBBERHOSE (FOR AIR PURGEVALVE)       30114430         32       HOSEBAND (FOR RELIEF VALVE)       30084480         33       HOSEBAND (FOR AIR PURGEVALVE)       68616090         34       SOUND PROOF MATERIALI       20611960         35       SOUND PROOF MATERIALI       20611970         36       SOUND PROOF MATERIALI       20611980         37       SOUND PROOF MATERIALI       20611990         38       SOUND PROOF MATERIALI       20612000         39       SOUND PROOF MATERIALI       20612010         40       OUTDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAY VALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090	-		
32       HOSEBAND (FOR RELIEF VALVE)       30084480         33       HOSEBAND (FOR AIR PURGEVALVE)       68616090         34       SOUND PROOF MATERIALI       20611960         35       SOUND PROOF MATERIALI       20611970         36       SOUND PROOF MATERIALI       20611980         37       SOUND PROOF MATERIALI       20611990         38       SOUND PROOF MATERIALI       20612000         39       SOUND PROOF MATERIALI       20612010         40       OUTDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAY VALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
33       HOSEBAND (FORAIR PURGEVALVE)       68616090         34       SOUND PROOF MATERIALI       20611960         35       SOUND PROOF MATERIALI       20611970         36       SOUND PROOF MATERIALI       20611980         37       SOUND PROOF MATERIALI       20611990         38       SOUND PROOF MATERIALI       20612000         39       SOUND PROOF MATERIALI       20612010         40       OUTDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAY VALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
34       SOUND PROOF MATERIALI       20611960         35       SOUND PROOF MATERIALI       20611970         36       SOUND PROOF MATERIALI       20611980         37       SOUND PROOF MATERIALI       20612000         38       SOUND PROOF MATERIALI       20612010         40       OUTDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAYVALVE       30104090		<u> </u>	
35       SOUND PROOF MATERIAL2       20611970         36       SOUND PROOF MATERIAL3       20611980         37       SOUND PROOF MATERIAL4       20611990         38       SOUND PROOF MATERIAL5       20612000         39       SOUND PROOF MATERIAL6       20612010         40       OUTDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAY VALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
36       SOUND PROOF MATERIAL3       20611980         37       SOUND PROOF MATERIAL4       20611990         38       SOUND PROOF MATERIAL5       20612000         39       SOUND PROOF MATERIAL6       20612010         40       OUIDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAYVALVE       30104090			
37       SOUND PROOF MATERIALA       20611990         38       SOUND PROOF MATERIALS       20612000         39       SOUND PROOF MATERIALG       20612010         40       OUTDOOR THERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAY VALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
38       SOUND PROOF MATERIAL5       20612000         39       SOUND PROOF MATERIAL6       20612010         40       OUTDOORTHERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
39       SOUND PROOF MATERIAL6       20612010         40       OUTDOORTHERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAYVALVE       30104090			
40       OUTDOORTHERMISTOR HOLDER       20040100         41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAYVALVE       30104090			
41       FUSE(5A)       40016410         42       FUSE(3.15A)       40016400         43       COIL, 4-WAY VALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
42       FUSE(3.15A)       40016400         43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAYVALVE       30104090			
43       COIL, 4-WAYVALVE       30112610         44       TANKHEATER       30114370         45       RELIFIVALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAYVALVE       30104090			
44       TANKHEATER       30114370         45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
45       RELIEF VALVE       30112670         46       AIR PURGEVALVE       30112680         47       PRESSURE GALGE       30112690         48       4-WAY VALVE       30104090		<u> </u>	
46       AIR PURGEVALVE       30112680         47       PRESSURE GAUGE       30112690         48       4-WAY VALVE       30104090			
47         PRESSURE GAUGE         30112690           48         4-WAYVALVE         30104090			
48 4-WAYVALVE 30104090			
	49	PACKING B	30113030
50 PACKING C 30113060			
51 ORNG(P4) 01107120			
52 ORING (PG) 01107600			
53 ORNG(P14) 01107150	$\vdash$		
54 QUICKEASIENER 52775700		•	
55 QUICKEASTENER 00633600		•	
56 QUICKEASTENER 00601690		<u> </u>	
57 DRAINPLUG 30078010	_ 57	DRAIN PLUG	30078010

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ISSUED	DEC.2009